



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,707	07/14/2003	Hiroshi Maeda	0649-0911P	4186
2292	7590	09/19/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			TRINH, MICHAEL MANH	
			ART UNIT	PAPER NUMBER

2822

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/617,707	MAEDA ET AL.	
	Examiner	Art Unit	
	Michael Trinh	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 11-49 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 6-8 is/are allowed.
- 6) ☒ Claim(s) 1,2,9 and 10 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 2822

## DETAILED ACTION

\*\*\* This office action is in response to Applicant's Amendment filed on July 11, 2005.

Claims 1-49 are pending, in which claims 11-49 are non-elected.

\*\*\* The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Election/Restrictions*

1. This application contains claims 11-49 drawn to an invention nonelected with traverse in Paper Mail date September 24, 2004. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

### *Specification*

2. Specification page 1, updating status information of parent application "Serial No. 10/419,861 filed April 22, 2003" to include --now abandoned-- is respectfully requested.

### *Claim Rejections - 35 USC § 112*

3. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 10, the phrase "the resin shielding step..." lacks proper antecedent basis, since claim 3 does not recite the step of "resin shielding..."

### *Claim Rejections - 35 USC § 102*

4. Claims 1,2,9 are rejected under 35 U.S.C. 102(a) as being anticipated by Hata (JP-2002329850).

Hata teaches (at Figures 1-13; computer English translation at paragraphs 0015-0036) a method of manufacturing a solid-state imaging device comprising the steps of: forming a plurality of IT-CCDs 102 on a surface of a semiconductor substrate 1 (Figs 1-4, paragraphs 0015-0026); bonding a translucent member 201 to the surface of the semiconductor substrate 1 in order to have a gap opposite to each light receiving region of the IT-CCD 102 (Fig 8; paragraph 0030); forming an external connecting terminal (e.g. 1c, 222, 2) corresponding to the IT-CCD

(Figs 1,4,9,13; paragraphs 0015-0034); and isolating a bonded member obtained at the bonding step and provided with the external connecting terminal for each of the IT-CCDs (Figs 1,13; paragraph 0035), wherein the external connecting terminal (e.g. 222,2) is exposed away from the bonded member 201. Re claim 2, wherein the step of bonding a translucent member includes the steps of: preparing a translucent substrate 201 having a concave portion formed between resin 3 (Figs 7-9,1; paragraph 0016+, 0029-0030) in a position corresponding to a region in which the IT-CCD 102 is to be formed; and bonding the translucent substrate 201 to the surface of the semiconductor substrate 1 (Figs 8-9). Re claim 9, prior to said step of isolating, further comprising the step of: resin 3 shielding as a photo-curing adhesive (Figs 7-12; paragraphs 0029-0034) for shielding the translucent member 201 in vicinity of the bonding link with the surface of the semiconductor substrate 1 by a resin 3 so that the external connecting terminal is exposed.

***Allowable Subject Matter***

5. Claims 3,6-8 are allowed.
6. Claims 4-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter:  
Re claims 3,6-8: Claim 3 is indicated allowable and objected to as being dependent upon a rejected base claim in the last office action. Applicant rewrites claim 3 in independent form to include all of the limitations of the base claim 1 and any intervening claims. Claim 3 is accordingly allowed. Amended claims 6-8 are allowed as depending upon allowed base claim 3.  
Re claims 4-5: The references of record, alone or in combination, do not fairly anticipatively disclose each and every aspect of the claimed method of manufacturing a solid-state imaging device, or fairly make a prima facie obvious case of the claimed method, in combination with other processing claimed limitations as recited in base claim 1, the further inclusion of, as in claim 4, wherein prior to the bonding step, selectively removing the surface of the translucent member to surround a light receiving region, thereby forming a spacer, and wherein at the bonding step, a gap is formed between the semiconductor substrate and the

Art Unit: 2822

translucent member through the spacer provided to surround the light receiving region; and as in claim 5, wherein the isolating step includes the step of separating the translucent member to position a peripheral edge portion of the translucent member onto an inside of a peripheral edge portion of the IT-CCD in such a manner that a surface of a peripheral edge portion of the IT-CCD 102 is exposed away from the translucent member.

***Response to Amendment***

8. Applicant's remarks filed July 11, 2005 with respect to pending claims 1,2,9 have been considered but are moot in view of the new ground(s) of rejection.

Applicant remarked (at remark, pages 18-20 and Appendix) that, for example, "...Hata additionally fails to disclose an external connecting terminal provided outside of the peripheral edge portion of the translucent member. That is, Hata fails to disclose a bonding pad that is not covered with resin...".

In response, this is noted and found unconvincing. Claimed subject matter, not the specification, is the measure of invention. As can be seen, base claim 1 merely recites "wherein the external connecting terminal is exposed away from the bonded member...". As can be seen, the claims do not even mention "bonding pad" and "resin". In Hata, as shown in Figures 1,4,9,13; and paragraphs 0015-0034, the external connecting terminal (e.g. 222, 2,1c) corresponding to the IT-CCD is exposed away from the bonded member. In Hata, resin 3 shielding as a photo-curing adhesive (Figs 7-12; paragraphs 0029-0034) for shielding the translucent member 201 in vicinity of the bonding link with the surface of the semiconductor substrate 1 by a resin 3 so that the external connecting terminal is exposed.

Claimed subject matter, not the specification, is the measure of invention. Limitations in the specification cannot be read into the claims for the purpose of avoiding the prior art. In *Re Self*, 213 USPQ 1,5 (CCPA 1982); In *Re Priest*, 199 USPQ 11,15 (CCPA 1978).

\*\*\*\*\*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2822

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

\*\*\* Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael M. Trinh whose telephone number is (571) 272- 1847. The examiner can normally be reached on M-F: 8:30 Am to 5:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number is (571) 273-8300

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.  
Oacs-15



Michael Trinh  
Primary Examiner